Title (en)

IMIDAZOLIDINE-BASED METAL CARBENE METATHESIS CATALYSTS

Title (de)

IMIDAZOLIDIN ENTHALTENDE METALLCARBEN-KATALYSATOREN FÜR DIE METATHESE

Title (fr)

CATALYSEURS DE METATHESE DE CARBENE METALLIQUE A BASE D'IMIDAZOLIDINE

Publication

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Application

EP 00937665 A 20000522

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Abstract (en)

[origin: WO0071554A2] The present invention relates to novel metathesis catalysts with an imidazolidine-based ligand and to methods for making and using the same. The inventive catalysts are of formula (I) wherein : M is ruthemium or osmium; X and X<1> are each independently an anionic ligand; L is a neutral electron donor ligand; and, R, R<1>, R<6>, R<7>, R<8> and R<9> are each independently hydrogen or a substituent selected from the group consisting of C1-C20 alkyl, C2-C20 alkenyl, C2-C20 alkynyl, aryl, C1-C20 carboxylate, C1-C20 alkoxy, C2-C20 alkenyloxy, C2-C20 alkynyloxy, aryloxy, C2-C20 alkoxycarbonyl, C1-C20 alkylthiol, aryl thiol, C1-C20 alkylsulfonyl and C1-C20 alkylsulfinyl, the substituent optionally substituted with one or more moieties selected from the group consisting of C1-C10 alkyl, C1-C10 alkoxy, aryl, and a functional group selected from the group consisting of hydroxyl, thiol thioether, ketone, aldehyde, ester, ether, amine, imine, amide, nitro, carboxylic acid, disulfide, carbonate, isocyanate, carbodiimide, carboalkoxy, carbamate, and halogen. The inclusion of an imidazolidine ligand to the previously described ruthenium or osmium catalysts has been found to dramatically improve the properties of theses complexes. The inventive catalysts maintains the functional group tolerance of previously described ruthenium complexes while having enhanced metathesis activity that compares favorably to prior art tungsten and molybdenum systems.

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CPC (source: EP KR)

C07F 15/00 (2013.01 - KR); **C07F 15/002** (2013.01 - EP); **C07F 15/0046** (2013.01 - EP)

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See references of WO 0071554A2

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